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Notice of Allowability	Application No.	Applicant(s)	
	10/677,102	BOUCHER ET AL.	
	Examiner	Art Unit	
	Edward Raymond	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/9/06.
2. ☒ The allowed claim(s) is/are 1,2,4-19,21,26-28,30-34 and 46.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. ☐ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. ☐ Notice of Informal Patent Application (PTO-152) 6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date <u>20060317</u>. 7. ☒ Examiner's Amendment/Comment 8. ☐ Examiner's Statement of Reasons for Allowance 9. ☐ Other _____. |
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DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph Maraia on March 17, 2006.

The application has been amended as follows:

Claim 1 is replaced with the following text:

"1. A method of measuring the speed of the speed of a marine vessel with a speed sensor having a known pulse rate comprising the steps of: substantially correcting non-linearities in the pulse rate so that the sensor produces a pulse stream output having a substantially constant pulse rate per unit of speed; reducing pulse-to-pulse variations of the pulse stream wherein the step of correcting includes performing a polynomial curve fit of an actual pulse rate of the sensor versus the true speed of the vessel to transform the actual pulse rate to a corrected pulse rate."

Claim 17 is replaced with the following text:

"17. A method for providing speed signals linearly proportional to the speed of a marine vessel through water comprising: generating the speed signals in the form of electrical pulses at a rate which is generally constant per distance traveled by the vessel over a specified time period; correcting for any variations in the rate by

processing the signals in accordance with an algorithm stored in a memory; and further comprising performing a polynomial curve fit of an actual pulse rate of the sensor versus the true speed of the vessel to transform the actual pulse rate to a corrected pulse rate.”

Claim 21 is replaced with the following text:

“21. The method of claim 17, further comprising standardizing the rate of the electrical pulses to a standard pulse rate.”

Claim 26 is replaced with the following text:

“26. A correction circuit for a paddlewheel speed sensor producing a speed signal with a known pulse rate comprising: a signal processor for processing the speed signal; a memory for storing an algorithm, the algorithm substantially correcting non-linearities in the pulse rate to produce a pulse stream having a constant pulse rate, and reducing pulse-to-pulse variations; and wherein the step of correcting includes using at least one polynomial curve of the actual pulse rate, performing a polynomial curve fit to transform the actual pulse rate into a corrected speed by comparing the polynomial curve of the actual pulse rate versus true speed of the vessel.”

Claim 28 is replaced with the following text:

“28. A method of correcting a sensed speed of a marine vessel, comprising: standardizing an actual pulse rate of the vessel to a standard pulse rate; and wherein the step of standardizing includes using at least one polynomial curve of the actual pulse rate, performing a polynomial curve fit to transform the actual pulse rate into a

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corrected speed by comparing the polynomial curve of the actual pulse rate versus true speed of the vessel.”

Claim 30 is replaced with the following text:

“30. The method of claim 28, wherein one polynomial curve is for low speeds and another polynomial curve is for high speeds.”

Claim 31 is replaced with the following text:

“31. The method of claim 28, wherein the polynomial curves are joined at a predefined speed.”

Claim 46 is replaced with the following text:

“46. A speed sensor for detecting the speed of a marine vessel, comprising: a circuit for correcting non-linearities associated with the speed sensor; and driver means for displaying a corrected speed of the marine vessel; and wherein the step of correcting includes using at least one polynomial curve of the actual pulse rate, performing a polynomial curve fit to transform the actual pulse rate into a corrected speed by comparing the polynomial curve of the actual pulse rate versus true speed of the vessel.”

Claim 3, 20, 22-25, 29 and 35-45 are cancelled.

Allowable Subject Matter

2. **Claims 1, 2, 4-19, 21, 26-28, 30-34 and 46** are allowed.

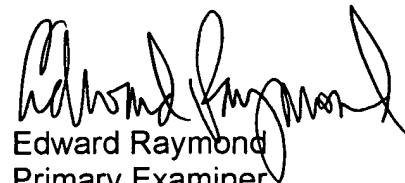
Contact Information

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Raymond whose telephone number is 571-272-2221. The examiner can normally be reached on M-F 8:30-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Edward Raymond
Primary Examiner
Art Unit 2857

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